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The FINAL TEST

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STEWART A. JELLETT COMPANY

Consulting and Constructing Engineers

REAL ESTATE TRUST BUILDING

PHILADELPHIA

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INTERNATIONAL

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IN this booklet we show illustrations of some of our operations. They are representative of the character of all our work. In all of them the final test of efficient, economical operation has been met and passed with credit.

Our training has all been along the line of obviating difficulties. It may be that extraordinary speed is the requirement. Or it may be lack of space, or unusual manufacturing conditions. Whatever they have been, we have always been able, after reasonable study, to offer a practical solution, one based on knowledge and not on guesswork.

We can do as much for you.

STEWART A. JELLETT COMPANY

A POWER plant is the last thing in the world which may be purchased solely upon the comparison of first costs. First cost, in this case, is the very last consideration. It has no bearing upon the final test which must invariably be applied.

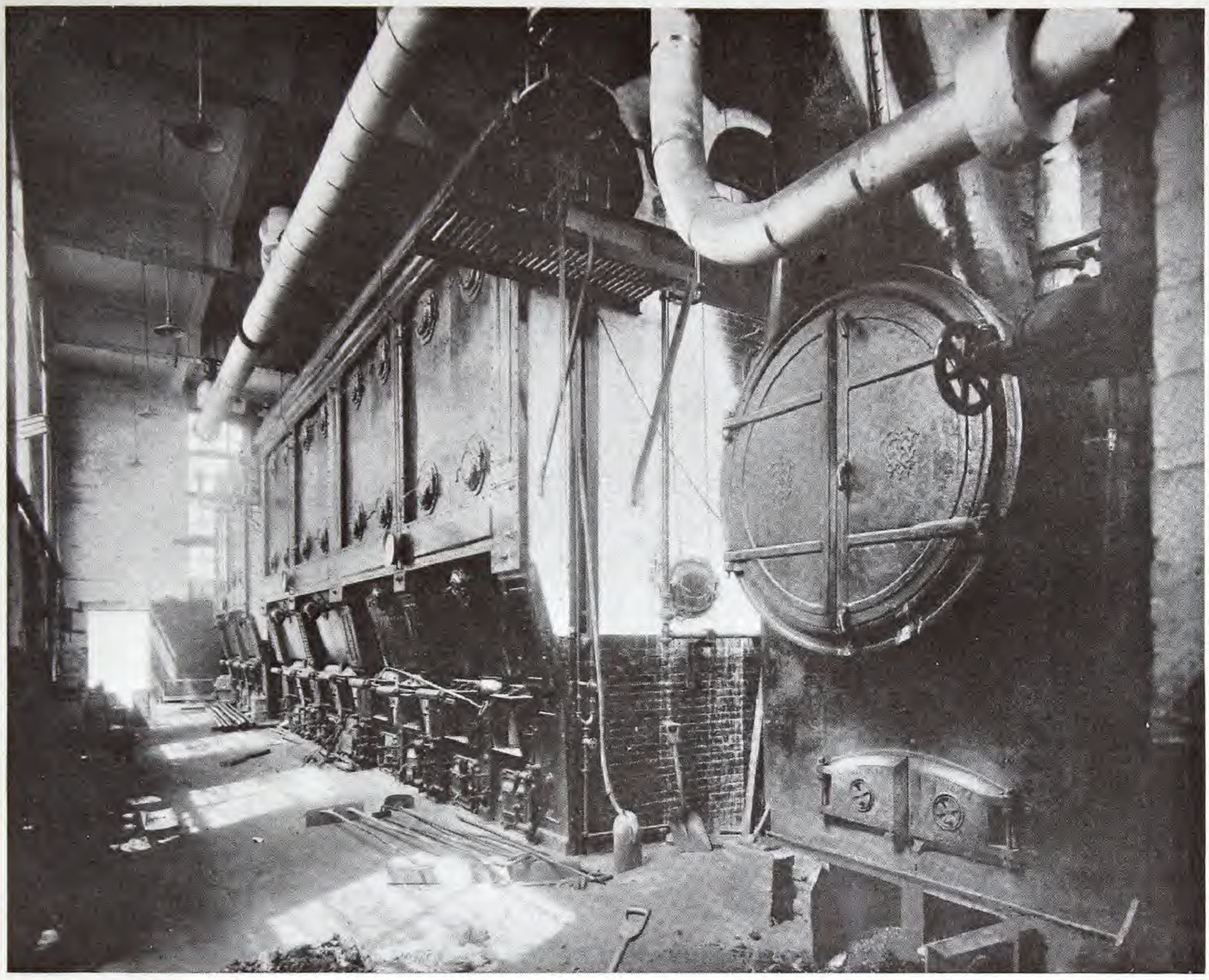
A power plant is installed with the object of performing a definite function at the minimum outlay for operation and upkeep. Such a plant is necessarily made up of a large number of varying items, all of which are interdependent. The plant is effective in proportion to the harmony of its members and the suitability of the whole to meet the demands which are made upon it.

The selection of the several members is a nice problem. The highest-priced apparatus is not invariably the most suitable.

The claims of machinery builders are naturally tinctured with optimism. The question of comparative capacity offers difficulty.

The problem is one which calls for expert engineering ability founded upon long, actual experience in meeting all sorts of conditions in a wide variety of activities. The engineer with such knowledge and experience brings to the problem the ability to select and arrange the essential units in the manner which will produce the greatest efficiency and economy.

The final test is, of course, the quality of operation. The absolute requirements are the amount of power, heat, ventilation, etc. These requirements met, comparative costs of operation and maintenance enter. Presuming the specifications as to

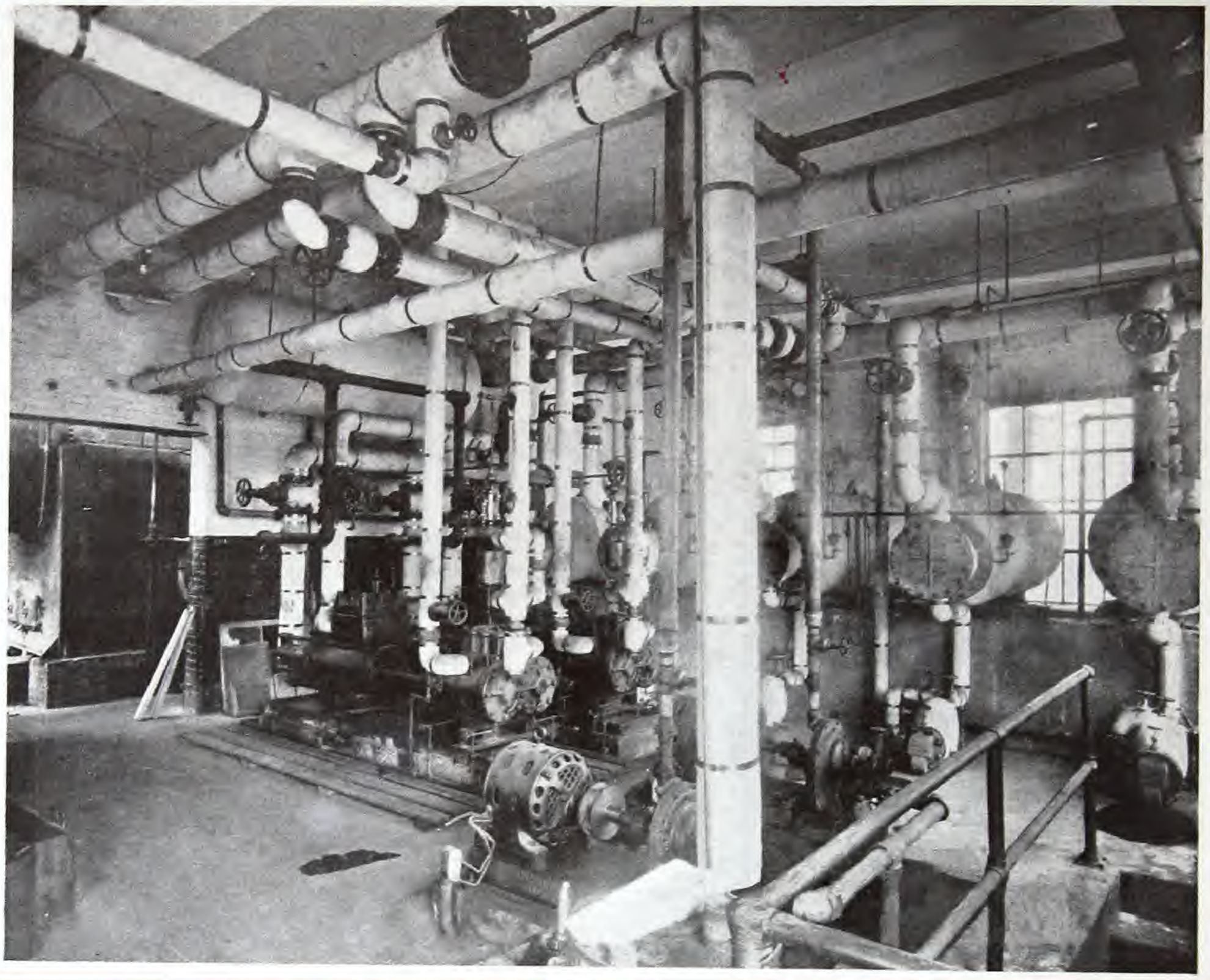


NEW TOWNSITE HEATING PLANT BOILER ROOM, HARRIMAN, PA.

quality and quantity have been met (not exceeded, for that represents waste), the actual comparative test is in the operating cost.

And it is this final test that we wish to meet. We know we can meet it because it is an old story with us. We bring to bear upon your problems a ripe experience in a great variety of lines of work. That we have not disappointed our clients is shown by the fact that those of yesterday are our clients today.

We ask for your consideration solely upon the basis of our usefulness to you. We know we can demonstrate that.



NEW TOWNSITE HEATING PLANT PUMP ROOM, HARRIMAN, PA.

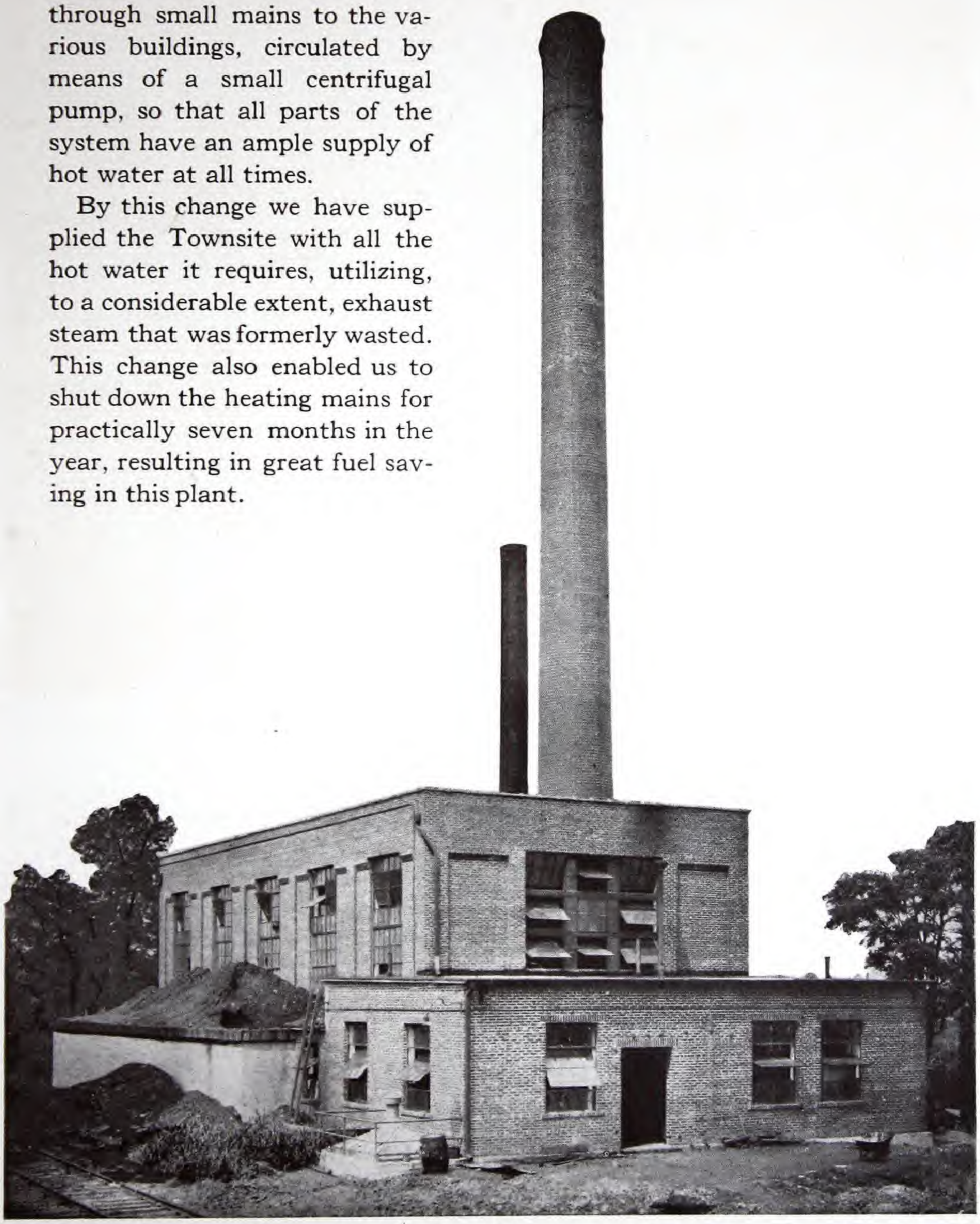
WE recently remodeled and reconstructed the Townsite Heating Plant, operated by the Emergency Fleet Corporation, in the town of Harriman, Pa., for heating the dwellings, boarding houses and other buildings, and also supplying hot water for domestic uses to them.

In the original plant there were some ten hot water generators of large size, located in different buildings from 400 to 1800 feet from the central power house. It was necessary to keep steam on the street mains throughout the year in order to supply these generators.

In the remodeling, we abandoned the generators in the various buildings, took three of the ten and erected them in the central power house, supplying them with exhaust steam. We arranged that two generators should supply all the water

needed, one being held in reserve. The hot water is distributed through small mains to the various buildings, circulated by means of a small centrifugal pump, so that all parts of the system have an ample supply of hot water at all times.

By this change we have supplied the Townsite with all the hot water it requires, utilizing, to a considerable extent, exhaust steam that was formerly wasted. This change also enabled us to shut down the heating mains for practically seven months in the year, resulting in great fuel saving in this plant.



POWER HOUSE, TOWNSITE HEATING PLANT, HARRIMAN, PA.

BUCKWALTER STOVE CO PA

HOTEL HARRIMAN, PA.

NY, ROYERSFORD, PA.

BUCKWALTER STOVE COMPANY

Our work in the Buckwalter Stove Company's plant was the design of a new central boiler plant, to furnish steam to both plants No. 1 and No. 2, abandoning the boilers in each and arranging the plant for future enlargement, so that all power purposes can be served from the new station, greatly increasing the power capacity and the facilities for handling fuel, etc.

The design of the complete mechanical plant in the office building of the Victor Talking Machine Company of Camden, N. J., was in our hands.

Karcher & Smith
Architects

VICTOR TALKING MACHINE COMPANY'S
OFFICE BUILDING IN CAMDEN, N. J.

Paul A. Davis, III, Architect

HIGH SCHOOL, CAMDEN, N. J.

CAMDEN HIGH SCHOOL

This is a building that has been designed to give the maximum conveniences, light and comfort to the pupils. We designed the complete mechanical and electric systems in the building and supervised their installation.

The plant consists of a central boiler equipment, a complete heating and ventilating system of air deliveries into all occupied rooms. The temperature of the air delivered to the classrooms and the control of steam to the radiators in the classrooms are regulated by a modern thermostatic system. There are exhaust fans to withdraw the vitiated air from all classrooms, a separate fan for the main auditorium and an exhaust fan to carry the fumes from the chemical laboratories.

Hot water generators furnish hot water to all washrooms, laboratories, etc. In addition, steam is supplied for cooking fixtures, and for a limited amount of laundry work, glue pots, etc., in the Manual Training Department. The entire equipment is modern.

MIDVALE STEEL COMPANY OFFICE BUILDING

We designed the complete heating work in this building, arranging, in addition to the heating system, a very complete ventilating system, with air washers and temperature control, delivering tempered air into all parts of the building, and washing it clear of smoke and dirt.

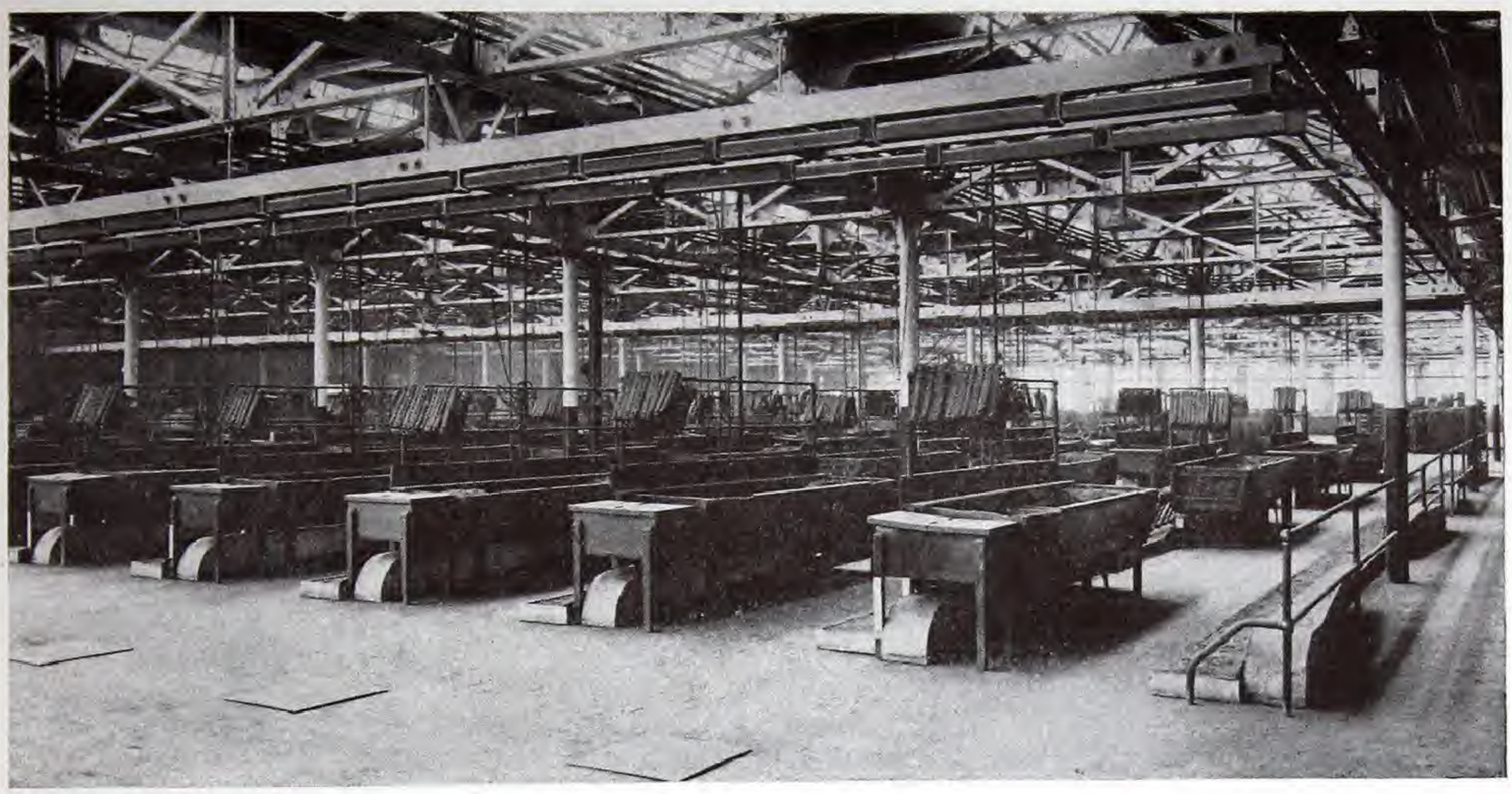
We also planned and supervised the electric lighting and power, the refrigerating plant and artificially cooled drinking water system used throughout the building.

Thomas B. Lippincott, Architect

THE ABOVE IS TYPICAL OF MANY OLD PLANTS WHICH WE HAVE MODERNIZED WHILE CONTINUING THEIR OPERATION :: WE HAVE SINCE DESIGNED MANY OTHER CHANGES AND ADDITIONS FOR THE GEORGE W. BLABON COMPANY, INTENDED TO PROMOTE EFFICIENCY, INCREASE THE OUTPUT OF GOODS AND REDUCE LABOR COSTS

In 1912 we were called in to examine the plant of The George W. Blabon Company, Nicetown, Philadelphia, manufacturers of linoleum, to report on its condition and to make suggestions for improvements. After a careful study of the situation we recommended the abandonment of three old boiler houses and numerous engines scattered throughout the plant, and the erection of a new Central Power Station, using boilers of large size, equipped with automatic stokers and other modern mechanical appliances, designed for the use of low-grade fuels. It was likewise recommended that the power be generated in large electric generating units and transmitted by wire in underground conduits to the numerous buildings in which power was required.

Our recommendations were accepted and the equipment installed, with the result that an immediate saving of approximately twenty per cent in consumption of coal was effected, and there was a material reduction in the working force handling the engines, boilers, coal, ashes, etc. In addition, a very marked saving was made in the cost of power transmission. Due to the large increase in the business since 1912, more power is being used today, and the new Central Power Station is showing greater economy now than when first installed.

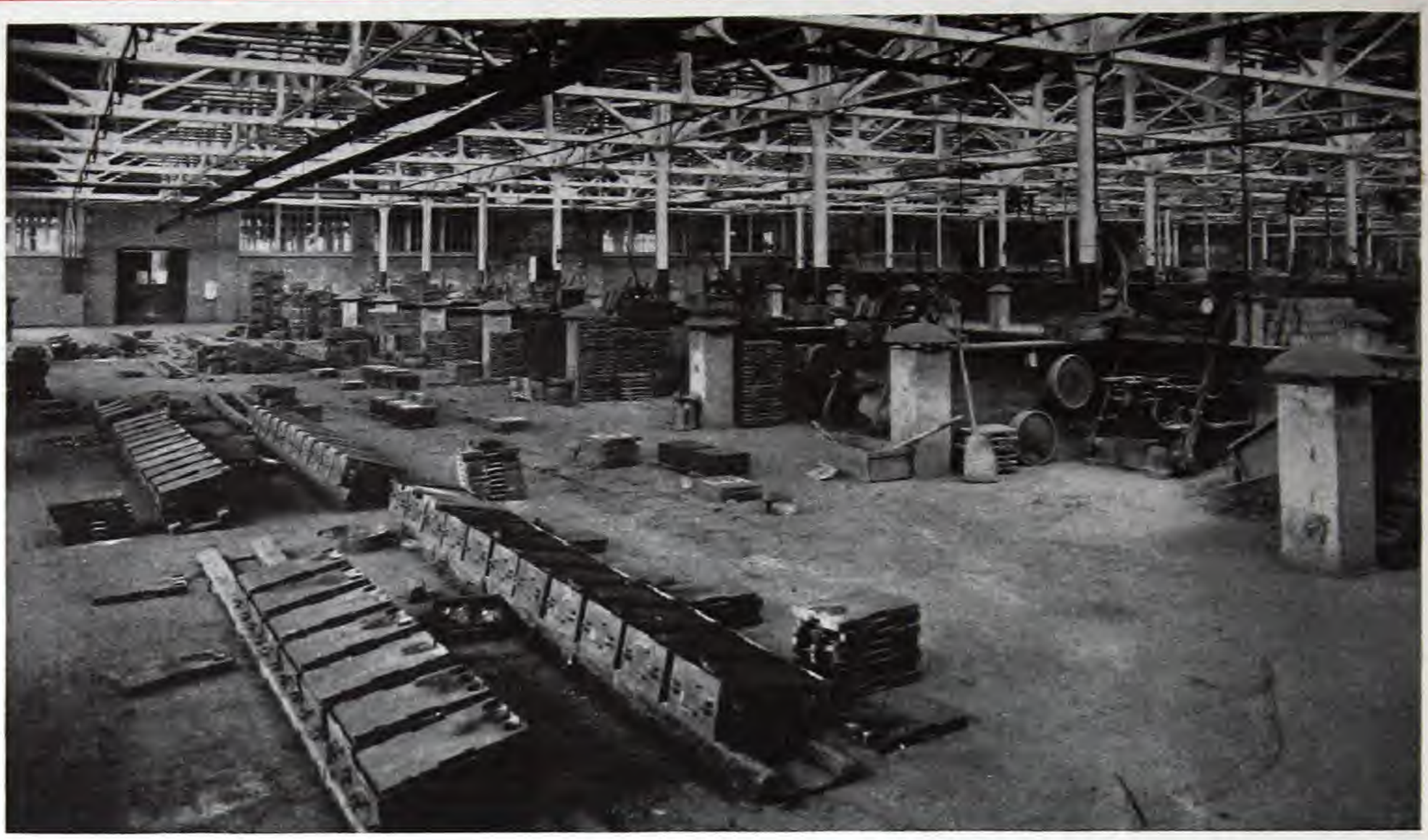


Charles T. Main, Architect

A few years ago, The Yale & Towne Mfg. Co., Stamford, Conn., erected a large brass foundry, for which we designed the power, heating, lighting, fire protection and other mechanical features. An extensive ventilating system was installed in this foundry on entirely new lines, delivering air in large volumes through ducts erected under the work benches, discharging where the pouring was being done, in order not only to get rid of the heat, but to carry with it the smoke and dust as well. As a result, the air of this foundry (some 200 x 300 feet in size) is so free from dust and smoke that one can see over the entire room when the foundry is working to capacity.

We quote from an article in "The Foundry:"

"As a result of careful study the ventilation is exceptionally good throughout the entire plant. The melting room is clear of smoke and fumes at all times. The photographs from which the accompanying illustrations were made were taken when the plant was in operation without interrupting any of the work. Although metal is being poured in the molding room continuously, the fumes and gases are carried away as fast as they are generated and a clean, wholesome atmosphere is maintained at all times. Illustrations were made from photographs taken while the plant was in operation and when pouring was going on. As a result of the careful attention given to ventilation, the employes are healthier and more contented and the volume of work per man per day has been increased without any apparent increase in effort and with less fatigue. The ventilating system was designed and installed under the



INTERIOR OF FOUNDRY — Charles T. Main, Architect

supervision of Stewart A. Jellett, Philadelphia. Mr. Jellett also designed the heating, plumbing, lighting and sprinkler systems.

"A positive ventilating system has been provided and two fans have been installed; one furnishes the fresh air and the other exhausts vitiated air from the service building. The main air supply is drawn in through an opening over the roof of the molding room and is delivered to the ventilating ducts by a 7/8-housed multi-vane fan. This fan delivers 94,000 cubic feet of air per minute."

Shortly after the foundry was completed, the United States having entered the war, the Yale & Towne Mfg. Company was using its brass foundry 24 hours a day in order to get out the maximum capacity for war purposes. This condition of continuous operation would not have been possible without the extensive ventilating system installed.

Extracts from a letter to us of January 16, 1920

FROM YALE & TOWNE MFG. CO.

It might be of interest to you to know that during the time we were handling the British Fuse Contract in our brass foundry, we were pouring about 70 tons of yellow brass per day. This work went on for nearly two years and we had little or no difficulty in the foundry during that time, nor did we feel any bad results from the fumes.

SOME OF OUR CLIENTS

OWNERS

American Bronze Company	Philadelphia, Pa.
American Engineering Co.	Philadelphia, Pa.
G. W. Blabon Company	Philadelphia, Pa.
Buckwalter Stove Company	Royersford, Pa.
Caledonia Woolen Mills	Philadelphia, Pa.
Otto Eisenlohr & Bros.	Philadelphia, Pa.
Farr & Bailey Mfg. Company	Camden, N. J.
Felton, Sibley & Company	Philadelphia, Pa.
Edward F. Henson & Co.	Philadelphia, Pa.
The Leeds Company	Atlantic City, N. J.
Lit Brothers	Philadelphia, Pa.
Merchants Shipbuilding Corp.	Harriman, Pa.
Miller Lock Company	Frankford, Pa.
Phila. Textile Machine Co.	Philadelphia, Pa.
The A. Schoenhut Co.	Philadelphia, Pa.
Strawbridge & Clothier	Philadelphia, Pa.
Supplee-Biddle Hardware Co.	Philadelphia, Pa.
S. S. White Dental Mfg. Company	Philadelphia, Pa.
Yale & Towne Mfg. Company	New York

ARCHITECTS

D. Knickerbacker Boyd	Philadelphia, Pa.
Clarence W. Brazer	Chester, Pa.
Brown & Whiteside	Wilmington, Del.
Bunting & Shrigley	Philadelphia, Pa,
Paul A. Davis, 3d	Philadelphia, Pa.
Furness, Evans & Co	Philadelphia, Pa.
F. G. Fahnestock	Harrisburg, Pa.
Walter H. Hankin	Trenton, N. J.
Wm. D. Hewitt	Philadelphia, Pa.
Lansing Holden	New York, N. Y.
J. Osborne Hunt	Trenton, N. J.
Jacoby & Everett	Allentown, Pa.
C. Harry Kain	Harrisburg, Pa.
Karcher & Smith	Philadelphia, Pa.
Chas. Barton Keen	Philadelphia, Pa.
W. H. Lee	Shamokin, Pa.
Thos. B. Lippincott	Philadelphia, Pa.
Lockwood-Greene & Co	New York, N. Y.
Wm. Michler	Easton, Pa.
Morris & Erskine	Philadelphia, Pa.
Fred. Muhlenberg	Reading, Pa.
Chas. E. Oelschlager	Philadelphia, Pa.
Rankin, Kellogg & Crane	Philadelphia, Pa.
Spencer Roberts	Philadelphia, Pa.
Henry Y. Shaub	Lancaster, Pa.
C. Emlen Urban	Lancaster, Pa.
Frank R. Watson	Philadelphia, Pa.
George Wild	Johnstown, Pa.

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